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JUN 5 - 1919

NEW SERIES VOL. V

cop. 2

NO. 1

ARNOLD ARBORETUM

HARVARD UNIVERSITY



BULLETIN

OF

POPULAR INFORMATION

JAMAICA PLAIN, MASS.

MAY 1, 1919

The winter of 1918-19 was as exceptional in its mildness as the previous winter was exceptional in its severity. The thermometer only once registered zero at the Arboretum, and although little snow fell the ground was at no time frozen to any great depth. No injury has apparently been done by the winter to any plant in the Arboretum, but it is interesting to note that the leaves of the eastern American Yew (*Taxus canadensis*) growing in a position fully exposed to the sun are browner this spring than they were a year ago. The mild winter had, too, a curious effect on the winter flowering Witch Hazels. The American species (*Hamamelis vernalis*) flowered as usual at the end of December and in early January, but the Japanese and Chinese species did not open their flower buds until the end of February or a month or six weeks later than in previous years. The Chinese Witch Hazel (*H. mollis*) has not before been so covered with flowers; and as the plants grow larger the value of this beautiful shrub for the decoration of the winter garden is more clearly shown. The flowers of no other Witch Hazel are so large and beautiful, and the handsome leaves turn to brilliant shades of yellow and orange before falling in November. This plant is still rare in American gardens and probably is not to be found in American nurseries. Seeds have not yet been produced in the Arboretum, and it is only by grafting it on the American species that the Chinese plant can be now increased.

In spite of the mild weather in February and March vegetation in the Arboretum was not unusually advanced on the first of April. The Leatherwood (*Dirca palustris*) opened its flowers on the 6th of April,

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or only a day earlier than last year, and other April flowering shrubs have blossomed at their normal time. On April 2nd the temperature fell to 23° Fahrenheit. This ruined the flowers of the north China Peach (*Prunus Davidiana*) which were just opening and those of the earliest of the Azaleas (*Rhododendron dahuricum*) whose rose-colored corollas were just emerging from the buds. On the nights of the 24th and the 25th the thermometer registered as low as 24°. This ruined the flowers of the early blooming Magnolias, but the flowers of the Forsythias, Cherries, Plums and Apricots show no signs of injury. Freezing weather in April is not unusual in New England and its effect on the flowers of different plants can well be studied by persons who have in mind the planting of spring gardens. The flowers of *Magnolia stellata*, *M. denudata* (better known as *M. conspicua*), *M. kobus* and its variety *borealis*, which open in April, are too often ruined by frost. To prevent this it is desirable to plant these trees and shrubs on the north side of other trees, and especially of evergreen trees, where the flowers may be expected to open seven or eight days later than on plants fully exposed to the sun. The hybrid Chinese Magnolias with pink or rose-colored flowers all bloom later than the white-flowered species and their flowers are rarely injured by cold although the unfolding petals of some of these hybrids were badly discolored by the cold of the past week. These hybrids therefore, although their flowers are less beautiful than those of the species, are better garden plants in this climate. The best known of these hybrids is called *M. Soulangeana*, of which there are several varieties differing in the greater or less amount of pink or rose color in the petals. The flowers of *Rhododendron dahuricum*, as has already been stated, were spoiled this spring but last year were uninjured. Its variety with persistent leaves (var. *sempervirens*) bloomed a few days later and escaped injury. A few days later the flowers of the north China and Korean *Rhododendron mucronulatum* opened, and although now beginning to fade were in good condition during fully two weeks. A more southern plant and therefore inclined to bloom later than *R. dahuricum*, it is a better garden plant in this climate and one of the handsomest mid-April flowering shrubs in the Arboretum. The Cornelian Cherry (*Cornus Mas*) is another plant for which the frosts of April have no terrors. The small, bright yellow flowers arranged in many-flowered clusters open late in March or in early April and remain in good condition for three or four weeks. There is no record here of their injury by frost. This is a shapely shrub or small tree of excellent habit; the leaves are bright green and the scarlet or rarely yellow fruit, which ripens late in summer, is cherry-like in appearance. The Cornelian Cherry is a native of eastern Europe and western Asia, and has been grown in Old World gardens for three centuries. There is no better early flowering shrub for our northern gardens in which, although it was brought to America certainly more than a hundred years ago, it is still too little seen.

Forsythias, after having lost a part of their flower-buds in three of the past five winters, are again covered with flowers which have not

been injured by the cold of the past week. The Arboretum collection contains specimens of all the species and varieties, and of many hybrids, and is interesting as indicating possibilities in plant breeding, when hybridizers enter a broader field than the one to which they have generally confined their efforts. The natural crossing of species of Forsythias has produced plants with handsomer flowers than those of their parents. This is true of some Lilacs and Crabapples, and of many Spiraeas, Deutzias and Rhododendrons, and it is not improbable that from the new material which has come into gardens in recent years handsomer garden shrubs and more valuable trees than those we now possess will reward the patient labors of the plant breeder. To the hybrid Forsythias the general name of *intermedia* has been given. The parentage of these plants is not perfectly clear, although one of their parents is certainly the Chinese *F. suspensa* var. *Fortunei*, the plant which is most often cultivated in American gardens. The handsomest of these hybrids and the handsomest Forsythia in the Arboretum collection, *F. intermedia spectabilis*, came here several years ago from a German nursery. The flowers of this form are bright yellow. Other handsome hybrids are var. *primulina*, with primrose-colored flowers, and var. *pallida*, with pale straw-colored flowers. The former appeared spontaneously in the Arboretum a few years ago. The flower-buds of all Forsythias are often killed in severe winters, but those of these hybrids were for a long time believed to be hardier than those of the species, although in the winter of 1917-18 they suffered even more than those of their parents.

Prunus persicoides. This is a hybrid between the Peach and the Almond, which also produces handsomer flowers than its parents. The plants of this hybrid were in full bloom during the excessive cold of last week which did not injure them. The flowers are an inch and a half in diameter, with a bright red calyx, pale pink or nearly white petals blotched with deep rose at the base, and bright red filaments. This hybrid as a flowering plant is, perhaps, the handsomest of all the Peach-Apricot-Almond group. It originated in Europe more than a hundred years ago, but if it has never been common in American gardens it is no longer so; and it is doubtful if it is known to any American nurseryman.

The earliest Pear to flower, *Pyrus ussuriensis*, has been in bloom for more than a week and the flowers are untouched by frost. This is probably the largest of all Pear-trees as specimens occasionally occur in Korea sixty feet or more tall, with trunks 14 feet in circumference. The flowers are not as large as those of some of the other Chinese Pear-trees, and the fruit is small and of no value. This tree, however, is exciting much interest among American pomologists who believe they have found in it a blight resisting stock on which to graft garden pears.

The Cherries of Eastern Asia have never been more thickly covered with flowers than they have during the past week, and several of them are still worth a visit. The delicate petals of the flowers of these trees and shrubs seem able to bear without injury the coldest April weather Massachusetts has known for many years.

The earliest Cherry to bloom in the Arboretum this spring was *Prunus concinna*, a small tree discovered by Wilson on the mountains of central China. In the Arboretum it first flowered when less than three feet high; it is perfectly hardy, and although the flowers, which are white with a wine-colored calyx, are less beautiful than those of several other Asiatic Cherries it does not seem possible for any plant of its size to produce a more abundant crop. There has always been misunderstanding about this plant in gardens as it was distributed by a London firm of nurserymen as *Prunus subhirtella*.

Prunus tomentosa, a native of northern and western China begins to open its flowers only a day or two later than *P. concinna*. It is a shrub only five or six feet high, and when fully grown in abundant space for the spread of its branches often broader than tall. The flowers open from pink buds as the leaves begin to unfold, and the bright red stalks and calyx make a handsome contrast with the white petals which are often blotched toward the base with rose color. The small fruit ripens in June and is scarlet covered with short hairs, and is sweet and of good flavor. This shrub is attracting the attention of pomologists, living in the dry cold interior region of the continent where it is hardy and where it produces fruit of considerable comestible value. A form discovered in western China by Wilson (var. *endotricha*) is now established in the Arboretum where it blooms rather later than the northern plant. The fruit of this variety is destitute or nearly destitute of hairs.

Prunus incisa. This is another early flowering Cherry and a native of Japan where it is abundant on the eastern and southern slopes of Fuji-san and on the Hakkone Mountains. It is a large shrub or small tree with white or rarely pale rose-colored flowers which appear in drooping clusters before the deeply lobed leaves. The petals fall early, but the calyx, which gradually grows brighter in color, remains for some time on the young fruit and is showy. *P. incisa* is perfectly hardy in the Arboretum where it has now flowered for several seasons. For some reason this beautiful plant, however, is rare in American and European gardens.

Prunus triloba. Among the flowers of early spring few are more lovely than those of this little Almond from northern China which, in spite of the fact that it has flowered in the Arboretum every spring for thirty years, is still little known, although the form with double flowers (var. *plena*) is a common garden plant in this country and is often forced under glass for winter decoration. The single-flowered plant should be better known. It is a tall shrub with a rather irregular habit of growth. The flowers, which are pink, are produced in profusion.